

**[0074]** The example discussed herein illustrates the use of the pointer when images from the combined in-plane video space are displayed on a single screen as illustrate in FIG. 5A. However, it will be appreciated that the same result occurs when the images are presented in a multi-layer display device as illustrated in FIG. 5B. For example, if the pointer is not calibrated, it may move from the front display screen 18a to the back display screen 18c.

**[0075]** It will know be known that the pointer may be altered or calibrated in other ways in order to correct for the mismatch and the examples set forth above are not intended to be limiting. For example, the calibration software may limit the pointer movements to the front display, despite differences between the front display resolution and the resolution for the combined in-plane video space. In another example, if the combined in-plane video space has three portions in a horizontal spanning mode, representing three display screens in a multi-layer display device, the first distance may be reduced by a ratio of the first display screen resolution and the resolution of the combined in-plane video space, which may be  $\frac{1}{3}$ .

**[0076]** FIG. 7 illustrates a flowchart of an exemplary method for presenting images on each screen of a multi-layer display device. It will be readily appreciated that the method and illustrative flowchart provided herein are merely exemplary, and that the present invention may be practiced in a wide variety of suitable ways. While the provided flowchart may be comprehensive in some respects, it will be readily understood that not every step provided is necessary, that other steps can be included, and that the order of steps might be rearranged as desired.

**[0077]** A single video data or visual image signal may be created for presentation on a multi-layer display device at 700. As noted above, the single video data or visual image signal may be a combined in-plane video space that may allow a single video display device (e.g., using a single video card, processor, and the like) to drive a 3-D display device with multiple layer display panels. This combined in-plane video space may assist in the development of the video or other visual image output for front and back multi-layer displays since a single video data or visual image signal may be created rather than many individual visual image signals.

**[0078]** The combined single plane video space may be used having a first portion that may transfer video data or other visual images to be displayed on a corresponding front display screen at 702 and a second portion that may transfer video data or other visual images to a corresponding back display screen at 704. The combined single plane video space may be in any known single plane spanning mode, such as in a horizontal spanning mode, where the first portion is positioned adjacent, in a side-by-side orientation, the second portion, or in a vertical spanning mode where the first portion is above the second portion. Although only two portions representing two multi-layer display screens are shown for purposes of illustration, it will be readily appreciated that images for one or more additional display screens may also be provided on the combined in-plane video space.

**[0079]** Use of the combined single plane video space allows for the use of a single logic device or controller to present displayed images to all multi-layer display screens. This can reduce cost and complexity for a gaming machine and may be used on a gaming machine with very limited resources. Furthermore, use of a single controller allows for better graphic designs, as one single image and/or animation may be

designed and programmed to run natively according to the resolution of the combined in-plane video space, which may be the combined resolution of the front display and the back display, rather than designing two separate display images for a separate controller for each individual multi-layer display screen.

**[0080]** When the combined single plane video space is used with a pointer, touch screen, mouse, or any other input device at 706, a difficulty with the software configuration may be that movement of input on the touch screen does not match dimensions of the combined single plane video space. Thus, movement of a pointer on the screen may be distorted or mismatched. If the combined in-plane video space is in a horizontal spanning mode at 708, the pointer may be calibrated by reducing the horizontal distance of the pointer by a ratio of a horizontal component of the first display resolution and a horizontal component of the overall combined single plane video space resolution at 710. If the screen is not in a horizontal spanning mode at 708 (e.g. in a vertical spanning mode), the pointer may be calibrated by reducing the vertical distance of the pointer by a ratio of the vertical component of the first display resolution and a vertical component of the overall combined single plane video space resolution at 712. It will be known that the horizontal and vertical components correspond to the horizontal and vertical component of a resolution. For example, a screen having a resolution of 1820x1074 will have a horizontal component of 1820 and a vertical component of 1074. Generally, this prevents the pointer from moving at its normal speed since the screen may be set at a higher resolution.

**[0081]** While the foregoing method has been described with respect to specific screen resolutions they are not intended to be limiting as any resolution may be used. Additionally, although the foregoing invention has been described in detail by way of illustration and example for purposes of clarity and understanding, it will be recognized that the above described invention may be embodied in numerous other specific variations and embodiments without departing from the spirit or essential characteristics of the invention. Certain changes and modifications may be practiced, and it is understood that the invention is not to be limited by the foregoing details, but rather is to be defined by the scope of the appended claims.

What is claimed is:

1. A display system configured to display images on a single screen that are also adapted for display on an associated multi-layer display device having a plurality of display screens, comprising:

- a single display screen having a first display portion corresponding to a first display screen of the associated multi-layer display device, the first display portion containing a first visual image, and a second display portion corresponding to a second display screen of the multi-layer display device, the second display portion containing a second visual image, wherein the first display portion and second display portion combine to form a combined single plane visual image; and
- a logic device in communication with the single display screen and configured to process the combined single plane visual image for display on said single display screen.

2. The display system of claim 1, wherein the combined single plane visual image has a resolution equal to the sum of a first resolution of the first display screen of the associated